

## REMARKS

Claims 19, 38, 41, 43, 44, 47, 52, 53, and 61 are currently pending. Claims 48 and 49 have been canceled without prejudice or disclaimer. Claims 19, 38, 41, 43, and 44 have been amended for clarification and are supported by Figs. 3 and 4; page 6, line 15, through page 7, line 3; page 7, lines 6-9; page 8, lines 13-18; page 9, line 15, through page 10, line 6; and page 12, lines 4-9 of the original disclosure. It is respectfully submitted that no new matter has been added.

### **Written Description Rejection**

The Patent Office rejected claims 19, 38, 41, 43, 44, 47-49, 52, 53, and 61 under 35 U.S.C., first paragraph, as failing to comply with the written description.

Applicant wishes to note that MPEP 2163.02 sets out a standard for determining compliance with the written description requirement. This section states "Whenever the issue arises, the fundamental factual inquiry is whether the specification conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, applicant was in possession of the invention as now claimed." This section also states "The subject matter of the claim need not be described literally (i.e., using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement. If a claim is amended to include subject matter, limitations, or terminology not present in the application as filed, involving a departure from, addition to, or deletion from the disclosure of the application as filed, the examiner should conclude that the claimed subject matter is not described in that application."

As to claim 19, support for the claimed subject matter is found in Figs. 3 and 4, page 6, line 15, through page 7, line 3; page 7, lines 6-9; page 8, lines 13-18; page 9, line 15, through page 10, line 6, and page 12, lines 4-9 of the original disclosure.

As to claim 38, support for the claimed subject matter is found in Figs. 3 and 4; page 6, lines 17-18; page 7, lines 2-3 and 6-9; page 8, lines 13-18; and page 12, lines 4-9 of the original disclosure.

As to claim 41, support for the claimed subject matter is found in Figs. 3 and 4; page 6, lines 17-18, page 7, lines 2-3 and 6-9; page 8, lines 13-18; and page 12, lines 4-9.

As to claim 43, support for the claimed subject matter is found in Figs. 3 and 4;

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page 6, lines 17-18; page 7, lines 2-3 and 6-9; page 9, lines 3-14; and page 12, lines 4-9.

As to claim 44, support for the claimed subject matter is found in Figs. 3 and 4; page 6, lines 17-18; page 7, lines 2-3 and 6-9; page 8, lines 13-18; and page 12, lines 4-9.

#### **Telephone Interview**

In the telephone interview held of July 31, 2008, 2 P.M., Primary Examiner David Graybill and Applicant's Representative Walter Malinowski, the Examiner indicated that the proposed amendment of the claims to no longer recite "consist of" would overcome the 35 U.S.C. 112, first paragraph, rejection based on written description. When Applicant's representative asked how the claims could be placed in condition for allowance or placed in the best form for appeal, the Examiner indicated that he considered identifying allowable subject matter and making suggestions as how to place claims in the best form for allowance to be part of his duties that he practices. As an example, he did suggest that the claims may be made allowable by reciting layers not disclosed in the prior art or by excluding the prior art by negative limitations. He did not consider recitation of the term "consisting of" in the claims to satisfy the written description requirement under 35 U.S.C. 112, first paragraph. The Examiner considers the word "are" to be the same as "comprising" and would look to the case law for the meaning of "are." The Examiner referred to words which are inclusive and open-ended and words which are exclusive. Applicant's representative indicated that the words have different meanings and that the meaning of "are" is narrower than the meaning of "comprising," but the Examiner remained unconvinced.

#### **Regarding Use of the Term "Consist Of" and Other Language Recited in the Claims**

The Patent Office is reminded that terms are to be given their broadest reasonable meaning in light of the specification.

Claim 41 is unamended and recites the term "consist of." Use of this term is well supported by Applicant's filed application. If one of ordinary skill in the art were to review Figure 4 of Applicant's disclosure, he or she would see layers of uniform composition stacked one on the other. It would be clear to one of ordinary skill in the art that in each layer there is but one material in each layer. If more than one had been intended, the elemental atoms would be depicted by different representations. It has also been disclosed, on page 6, lines 15-18, that the diffusion barrier 315 "includes a stack of

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very thin layers 350, 360, generally of alternating composition” and that this stack may be of “two alternating layers of materials.” One of ordinary skill in the art, when viewing Figure 4 in light of this passage, would have a clear understanding that Applicant had full possession for the invention found in claim 41 where “the sub-layers consist of alternating sub-layers of tantalum (Ta) and one of the following metals: copper (Cu), scandium (Sc), yttrium (Y), and lanthanum (La).”

The term “consist of” need not be explicitly expressed within the application as filed to satisfy the written description requirement. MPEP 2163.07 states, inter alia, “mere rephrasing of a passage does not constitute new matter” and “a rewording of a passage where the same meaning remains intact is permissible.” MPEP 2111.01 states as follows: “(The USPTO uses a different standard for construing claims than that used by district courts; during examination the USPTO must give claims their broadest reasonable interpretation >in light of the specification<.). This means that the words of the claim must be given their plain meaning unless \*\*>the plain meaning is inconsistent with< the specification” and “[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent application.” MPEP 2163.02 states as follows: **“The subject matter of the claim need not be described literally (i.e., using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement.”**

Claim 19 recites, in pertinent part, follows: “wherein the stacked sub-layers are of alternating composition, where a layer of tantalum (Ta) alternates with a layer of one of the following metals: copper (Cu), scandium (Sc), yttrium (Y), and lanthanum (La).” One of ordinary skill in the art would see that Figure 4 shows alternating layers of uniform composition in which each layer has an amorphous structure and does not have a lattice structure. One of ordinary skill in the art would find page 6, lines 15-18, and page 12, lines 2-13, for example, to fulfill the written description requirement that Applicant had full possession of the claimed invention at the time the patent application was filed.

Claim 38 recites “wherein the stacked atomically thin films are alternating atomically thin films of tantalum (Ta) and one of the following metals: copper (Cu), scandium (Sc), yttrium (Y), and lanthanum (La).”

Claim 43 recites “wherein the plurality of stacked layers are alternating layers of

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tantalum (Ta) and one of the following metals: copper (Cu), scandium (Sc), yttrium (Y), and lanthanum (La).”

Claim 44 recites “wherein the at least three films are alternating films of tantalum (Ta) and one of the following metals: copper (Cu), scandium (Sc), yttrium (Y), and lanthanum (La).”

It is respectfully submitted that these claims also satisfy the written description requirement. It is also respectfully submitted that the verb “are” is not the same as the verb “comprise.” The infinitive of the verb “are” is “to be.” The claims recite that the alternating films (or, layers) are alternating films (or, layers) of tantalum and another metal. That is, the alternating films (or, layers) are **equivalent to** the alternating films (or, layers) of tantalum and another metal.

During the telephone interview of July 31, 2008, it came to the attention of Applicant’s representative that the verb “are” might be considered synonymous with the verb “comprise.” To interpret the verb “are” to mean “comprise” in the context of “the plurality of stacked layers are alternating layers of tantalum (Ta) and one of the following metals” would give the verb “are” an unintended and incorrect meaning of “include” and would suggest open endedness. The verb “to be” of which the verb “are” corresponds as the plural form and second person singular form in the present tense needs to be maintained as a word of definiteness. To do otherwise would be against public policy as it would create uncertainty in the patent field whose members rely on the verb “to be” and its forms such “are” and “is” to convey precision and certainty.

Applicant believes that the currently pending claims are described in the specification in a way to reasonably convey to one of ordinary skill in the art that Applicant had possession of the claimed invention at the time the application was filed. Applicant also believes that the currently pending claims define over the prior art of record.

The Patent Office is respectfully requested to reconsider and remove the rejections of the claims 19, 38, 41, 43, 44, 47, 52, 53, and 61 under 35 U.S.C. 112, first paragraph. Allowance of currently pending claims 19, 38, 41, 43, 44, 47, 52, 53, and 61 is earnestly solicited.

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